

planted in the corner of a garden or in recesses in a herbaceous border are very effective. They may be readily propagated by division of the old plants, the new ones soon developing into masses rivaling those from which they were taken. They may also be readily grown from seed, which some of them produce freely. It is desirable, however, that the seed be sown soon after collecting, as it does not keep well.

All of the species in cultivation are perfectly hardy in the latitude of New York, requiring no protection whatever, making them especially desirable for a herbaceous border, where permanency is a great desideratum.

NEW YORK BOTANICAL GARDEN.

## ADDITIONS TO THE FLORA OF THE CAROLINAS—II

BY W. C. COKER

### *Kalmia cuneata* Michx.

This species occurs plentifully on the edge of an open savanna on the south side of Prestwood's Lake, Hartsville, S. C. It appears in scattered slumps along the transition line between the savanna and a typical dense "bay" formation. The soil it stands in is a nearly saturated black humus, and is covered in many places with *Sphagnum*. Associated with the *Kalmia* are *Zenobia pulverulenta*, *Vaccinium australe*, *Azalea viscosa*, *Ilex glabra*, *Ilex coriacea*, *Aronia arbutifolia*, *Myrica cerifera*, *Myrica caroliniana*, *Xolisma foliosiflora*, *Fothergilla carolina*, *Pieris nitida*, etc.

It has been taken previously only from southeastern N. C. The New York Botanical Garden and the Gray Herbarium have it only from Bladen Co., N. C. The Biltmore Herbarium has it also from Cumberland Co. (Hope Mills), and Moore Co. (Aberdeen), N. C.

### *Pyxidantha barbulata* Michx.

Forms dense and extensive mats at several places in the sand hills north of Hartsville, S. C., e. g., on the Camden road about four miles from town. It grows in very sandy soil associated with such plants as arbutus (*Epigaea repens*) and wire grass (*Panicum neuranthum*). It was known heretofore only from

New Jersey and from southeastern North Carolina. This is one of the most beautiful and interesting of sandy plants.

*Mayaca fluviatilis* Aubl.

Plentiful in Prestwood's Lake, Hartsville, S. C. Its range has heretofore been given as the Gulf States and Tropical America. The plant grows in delicate, loosely woven masses, quite submerged and, in company with *Myriophyllum heterophyllum*, *Utricularia fibrosa*, *Utricularia biflora*, *Potamogeton diversifolius*, and *P. heterophyllum*.

*Helianthemum canadense* (L.) Michx.

This is found on sand hills near Kilgore's branch, Hartsville, S. C. April 14, 1910. Typically northern in its range, this plant has not been reported before below North Carolina. It was collected at Florence, S. C., by L. F. Ward (Herb. N. Y. Bot. Garden), and the Biltmore herbarium has it from Florence, S. C., and from near Augusta, Ga.

*Pentstemon australis* Small.

Dry, poor soil. Chapel Hill, N. C., May 14, 1910. Low, sandy flats, Hartsville, S. C., May 6, 1910. Heretofore published only from the Gulf States and westward, but the Biltmore herbarium has it from Dade City, Fla., Augusta, Ga., and southeastern North Carolina.

*Baptisia villosa* (Walt.) Ell.

Collected on sand hills across lake, Hartsville, S. C. May 22, 1910, and on sand hills near Kilgore's branch, Hartsville, S. C., April 14, 1910. Heretofore published only from Virginia and North Carolina of the seaboard states and extending westward to Arkansas; but Dr. John K. Small has collected it in Walton Co., Florida.

*Rubus betulifolius* Small.

Occurs on south side of Prestwood's Lake on the cannon place, April 23, 1910, in flower. Heretofore listed only from Georgia and Alabama, but in the herbarium of the New York Botanical Garden there is a sheet by Gibbs from Cooper River, S. C., that is referred to this species.

*Rubus Enslenii* Tratt.

In good soil in woods, Laurel Land, Hartsville, S. C. April 24, 1910. This is the one-flowered plant considered by some a form of *R. procumbens*, and I can find no record of its occurrence in South Carolina. The typical *R. procumbens* is found in Chapel Hill, N. C., where it forms dense mats in wet places.

*Carex texensis* (Torr.) Bailey.

It covers the ground under trees, in the yard of Dr. A. A. Kluttz, Chapel Hill, N. C. So far it has not been published from either of the Carolinas, but Homer D. House has collected it at Clemson College, S. C. It is now known from Southern Illinois to the Carolinas, Georgia, and westward.

This plant makes a good substitute for grass on lawns that are damp and densely shaded.

*Oenothera Drummondii* Hook.

This beautiful evening primrose was collected in very sandy soil along the trolley way on Sullivan's Island, S. C., Aug. 28, 1909. It has been collected from this island before (Herbarium of the New York Botanical Garden) and from Ormond, Florida (Gray Herbarium) but I cannot find that it has been reported from South Carolina or Florida, or indeed collected from any other of the Southern States east of Texas.

CHAPEL HILL, NORTH CAROLINA.

## ADDITIONS TO THE TREE FLORA OF THE UNITED STATES

BY JOHN K. SMALL

In several previously published papers\* I recorded a number of trees new to silva of the United States. They were brought to light through exploration in southern Florida, and are as follows: *Serenoa serrulata*, *Quercus Rolfsii*, *Chrysobalanus pello-carpus*, *Alvaradoa amorphoides*, *Suriana maritima*, *Cicca disticha*, *Mangifera indica*, *Rhus leucantha*, *Ilex Krugiana*, *Hibiscus Rosa-*

\*Bull. N. Y. Bot. Gard. 3: 419-440; Torreya 7: 123-125; Bull. Torrey Club 37: 513-518.